

- 84 MHz or 100 MHz options
- Pulse duration and power options
- Stable, long term mode-lock
- Integrated PZT for active repetition rate stabilisation



Overview

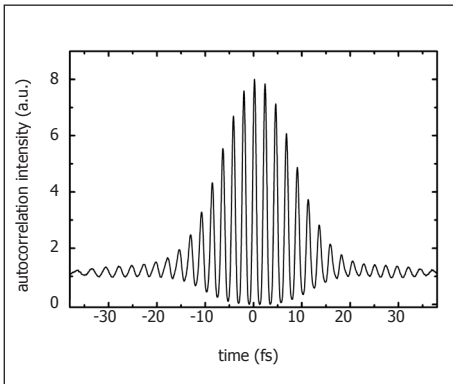
The **gecco** is a fully equipped, compact femtosecond laser in a sealed enclosure, available with an average power of >600 mW and with a choice of <15 fs or <20 fs pulse durations. The **gecco** is offered with repetition rates of 84 MHz or 100 MHz, and in both cases it is possible for the repetition rate to be locked to an external source.

Designed for simple installation and system integration, the **gecco** features a highly compact, vibration resistant laser head with an **opus 532nm** integrated pump source, and a separate, fully featured control unit connected through two detachable cables.

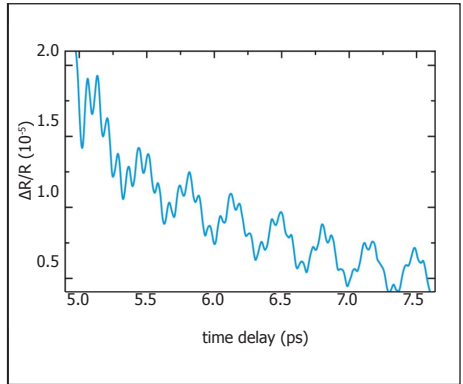
This highly stable laser boasts an industry leading lifetime and very low cost of ownership and comes with by a 2 year/unlimited hours warranty covering all operating specifications.

Optional repetition rate and active feedback

If required, control of the repetition rate can be achieved using a low speed piezo mounted cavity mirror with active feedback added using a second, high speed piezo. Regulation through the **TL-1000** repetition rate stabilisation unit achieves a timing jitter <100 fs. Alternatively, the piezos can be driven by customer supplied electronics.



Autocorrelation trace of **gecco** indicating emission of pulses with 15 fs duration.

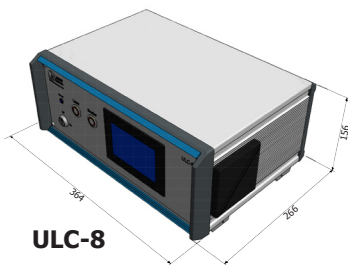
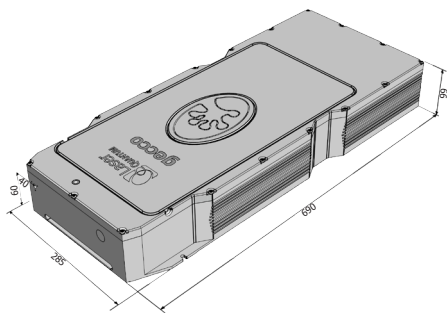


Application example: Pump-probe signature of coherent optical phonons in ZnO measured with the **gecco**.



The **gecco** can be used with the RemoteApp™ software that allows the pump laser to be controlled over the internet and connected to the Laser Quantum support team for monitoring laser performance, diagnosing opportunities for and carrying out laser optimisation.

Dimensions (mm)



Other information

Umbilical length: 2m
 Cooling system included
 Laser head weight: 24kg
 2 years warranty
 Please contact us for further details



Drawings are for illustrative purposes only. Please contact Laser Quantum for complete engineer's drawings.

Specifications*

	gecco one	gecco ultra
Average output power	>600 mW	
Center wavelength	800 nm (+/- 20 nm)	
Pulse duration ¹	<20 fs	<15 fs
Spectral FWHM	>40 nm	>50 nm
Repetition rate ^{2,3}	84 MHz or 100 MHz	
Pulse Energy	7.0 nJ (84 MHz) 6.0 nJ (100 MHz)	
Beam size	~1.2 mm +/-0.2 mm	
M-squared	<1.2	
Power stability ⁴	+/-1%	
Noise (RMS)	<0.2% RMS	
Polarisation ratio	>100:1	
Polarisation direction	Horizontal	
Operating temperature	21°C +/-5°C	
Weight (head only)	24 kg	
Warm-up time	<20 minutes	

* Laser Quantum operates a continuous improvement programme which can result in specifications being improved without notice.

¹ After appropriate extracavity dispersion compensation (not included).

² Select at time of purchase.

³ Accuracy ±1MHz, higher accuracy available on request. Other repetition rates available on request.

⁴ Measured over 24 hours after cold-start within operating temperature range.

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